DICK SMITH ELECTRONICS

T 2260
Hi–POWER
SOLDERING STATION

Instruction Manual

INTRODUCTION

Thank you for purchasing the T 2260 high power electronic soldering station. Its 100W of power and fast temperature response make it ideal for use in both lead-free and standard lead based soldering applications such as the service and repair industry, production lines, as well as for enthusiast electronics users.

We believe you will be more than satisfied with the versatility of your new soldering station. Please carefully read this instruction manual to maximise the benefits of your new station.

WARNING: This tool must be placed on its stand when not in use.

WARNING: The appliance is not intended for use by young children or infirm persons unless they are adequately supervised by a responsible person to ensure that they can use the appliance safely.

WARNING: Young children should be supervised to ensure that they do not play with the appliance.

WARNING: Do not inhale solder fumes.

WARNING: Keep tip and heating element away from the body, clothes and flammable material when in operation.

CAUTIONS

REMEMBER, THE TIP IS HOT: The tip and barrel of the soldering pencil will cause serious burns if they are allowed to contact any part of your body or clothing. Always return the soldering pencil to the safety of the holder after each use.

DO NOT WORK ON LIVE CIRCUITS: Before working on any mains powered equipment, make sure that it is turned off, and the mains plug is removed from the power point.

DO NOT USE IF DAMAGED: If either the mains power lead or the soldering pencil lead becomes damaged, or the soldering station becomes faulty, discontinue use immediately.

KEY FEATURES

ENERGY SAVER:

If the station has been idle for more than 15 minutes, the Energy Saver circuitry will automatically kick in. When the "Pause" LED is lit, the energy saver feature has engaged, decreasing tip temperature by 1/2 which cuts

power consumption and extends tip life (note that lead-free solder alloys require a higher soldering temperature which can lead to shorter tip life). A sensitive tilt switch built into the soldering pencil disengages the power saving feature when any movement of the wand is detected, allowing the station to quickly ramp up to the preset temperature.

DIGITAL DISPLAY:
Provides timely and accurate tip temperature readings. With the Set/Read switch in the "READ" position you can monitor the tip temperature via the front panel readout.

CELSIUS/FAHRENHEIT SWITCH:
A convenient front panel switch allows you to easily select which measuring system will be used to display tip temperature.

ISOLATED IRON HOLDER WITH TIP CLEANER:
To assist with RoHS requirements, the iron holder replaces the conventional tip-cleaning sponge with a non-abrasive spiral-brass cleaning system. The brass tip cleaner provides better cleaning and no water is necessary.

LOW VOLTAGE OUTPUT FOR SAFER OPERATION:
The power unit is isolated from the mains supply by a transformer and uses 32Vac to safely drive the high power 100W heating element for super-fast heat-up and quick temperature recovery. The soldering pencil is connected to the power unit with a heat resistant flexible cord.

ESD SAFE AND SPIKE-FREE CIRCUITRY:
The "zero voltage" electronic switching design also protects voltage and current sensitive components (CMOS devices, etc.) against damaging current and transient spikes commonly produced by less efficient, mechanically switched stations.

EXTERNAL CALIBRATION PORT:
For quick, convenient and precise tip temperature calibration.

PRODUCT DESCRIPTION

A temperature regulated soldering iron is essential for making consistent, reliable soldered connections. This high power soldering station was

specially designed to meet the lead-free soldering needs of the electronic production and enthusiast industries. The T 2260 incorporates electronic circuitry which enables the user to alter tip temperature from 200°C to 450°C (392-842°F) without changing tips or heating elements. The temperature is maintained within ±3°C (±6°F) of its operating temperature by a thermocouple sensor placed in the heating element, allowing the tip to rest against the sensor. The station's 100W power capacity results in both rapid heat-up and super fast temperature recovery during soldering.

WORKING TEMPERATURE:

To meet RoHS requirements, most lead-based solder alloys are not allowed in the production process. Lead-free solder alloys require a working temperature around 30°C (54°F) higher than previous generation electrical solder. The working temperature of lead-free solder is detailed below, but due to the different alloy options that are termed "lead-free", these can vary from manufacturer to manufacturer.

- Melting point 220°C (428°F)
- Normal operation 300-360°C (572-680°F)
- Production line operation 360-410°C (680-770°F)

When the iron's working temperature is set within the parameters suitable for the type of solder being used, and suitable soldering skill is applied, a good solder joint is more likely to be the outcome. Too low a temperature will slow the rate of solder flow, often leading to a "dry joint" which may be brittle or unreliable. Too high a temperature may burn the flux in the solder and result in a poor quality joint or permanent damage to the printed circuit board or components being worked on.

IMPORTANT:

Long-term use of temperatures above 410°C (770°F) is not recommended for normal soldering, but can be used for short periods of time when required. Excessive temperature will, however, shorten tip life.

PRE-USE INSPECTION

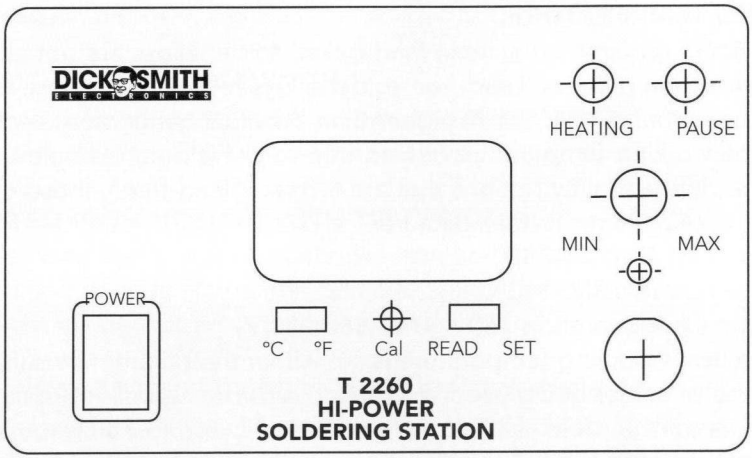
Ensure that the mains supply voltage is correct before using this product for the first time. Refer to the labelling on the rear panel of the station for the required mains voltage. Check carefully for any transportation damage before use, and if any is found, refer to your dealer before using this soldering station.

This package contains:

- T 2260 soldering station with digital temperature metering.
- Soldering pencil fitted with burn-resistant cable.
- Iron holder with brass tip cleaner.
- IEC style AC mains power cord with plug.

If any of these items are missing or damaged, refer to your dealer.

OPERATING PROCEDURES



1. Ensure that the base unit power switch is in the "OFF" position.
2. Plug the soldering pencil cable and AC power cord into the appropriate sockets on the base unit.
3. Connect the mains plug to a 240V mains outlet.
4. Set the temperature control knob to "MIN" then flip the slide switch under the digital display to the "SET" position.
5. Select the desired read-out temperature units by placing the slide switch to either the °C or °F position.
6. Turn the base unit power switch to the "ON" position. The light in the switch will glow to indicate power has been applied.
7. Adjust the temperature control knob until the digital display reads approx 250°C (482°F). Once the tip has heated up, tin the surface of the tip by applying a new covering of solder to protect it.
8. Set temperature control knob to the desired temperature 3 minutes after being warmed to 250°C (482°F) to extend tip life.
9. Flip the slide switch to the "READ" position so you can monitor the actual tip temperature.

The unit is now ready for use.

Energy Saver Feature:

Please note if the soldering iron idles for more than 15 minutes, the energy saving feature will automatically engage (evident by the "PAUSE" indicator being lit), reducing the idle temperature by 1/2 and extending your tip life. Moving the soldering pencil will deactivate the energy saver feature and the unit will quickly ramp up to the preset temperature.

Caution:

Soldering irons operate at high temperatures and can easily burn people or objects. Do not touch the tip or heater section of the soldering pencil at any time, and keep it a safe distance from flammable materials while the unit is on or while it's cooling. Please allow sufficient time for it to cool before changing tips or servicing the unit!

CARE OF TIPS

Caution:

The T 2260 soldering iron can reach very high temperatures. Be sure to turn the unit off prior to carrying out any maintenance or trouble shooting steps that require a cold tip!

IMPORTANT:

Remove the tip and clean regularly, especially after moderate to heavy use. Remove any loose build-up in the tip retaining assembly to prevent tip freezing.

Soldering iron tips available for the T 2260 are constructed using iron clad copper, and if used properly should maintain optimum operational life.

- Always tin the tip before returning it to the holder, turning off the station, or storing it for long periods of time. Push the tip into the brass cleaner several times to remove any dirt or oxides.
- Keeping the iron set at high temperatures (more than 400°C or 750°F) will shorten tip life. Minimise this activity.
- Do not apply excessive pressure to the tip or rub the joint with the tip while soldering; it does not improve the heat transfer and may damage the tip.
- Apply solder to the joint, not the tip when soldering.
- Never clean the tip with a file or abrasive materials.
- Do not use fluxes which contain chloride or acid. Use only rosin or resin cored solders.

- If an oxide film forms on the tip that cannot be removed using the brass tip cleaner while the iron is operating, it can usually be removed by extremely careful buffing with a fine 600-800 grit emery cloth. In some cases, isopropyl alcohol or equivalent can be used for cleaning the tip when the tip has cooled to room temperature. After tip cleaning, ALWAYS re-tin the tip with quality solder before using your iron again.

NEW TIPS

Applying the following steps will lead to optimum life.

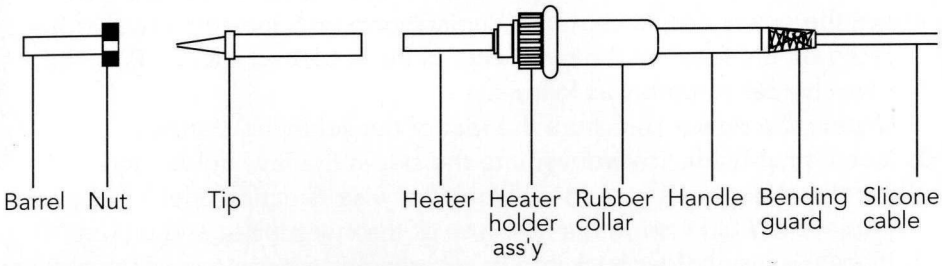
1. Set temperature to min. then turn the main power switch to the "ON" position.
2. Set temperature to 250°C (482°F).
3. Coat the tinned surfaces of the tip with rosin-core solder after reaching 250°C (482°F).
4. Set to desired temperature after allowing the unit to idle at 250°C (482°F) for 3 minutes.
5. The iron will be ready for use once it reaches the preset temperature.

IMPORTANT:
Remove and clean the tip regularly. If a new tip is to be installed, remove any loose build-up in the barrel assembly prior to fitting the tip, otherwise the tip may fuse to the heating element or retaining barrel.

COMMON CAUSES OF TIP UNWETTING

1. Tip temperature higher than 410°C (770°F).
2. The tip working surfaces are not tinned while the iron idles.
3. Lack of flux in soldering, wicking, repairing, and touch-up operations.
4. Wiping the tip on high sulphur content, dirty or dry sponges and rags.
5. Touching with organic substances such as plastic, resin, silicone, grease or other chemicals.
6. Impurities in solder and/or low tin content.

MAINTENANCE



Tip Maintenance and Dressing:
Tips can be changed or replaced simply by unscrewing the knurled nut on the heater barrel assembly. The station must be switched off and the soldering pencil allowed to cool before changing tips, as damage may result if the system is left on without the tip being in place! After removing the tip, blow out any oxide dust that may have formed in the tip retaining area of the barrel. Be careful to avoid getting this dust in your eyes. Replace the tip and screw back the knurled nut on the heater barrel assembly using only firm hand pressure to tighten. Pliers should only be used to gently tighten the nut to avoid burning your fingers, but care should be taken not to over-tighten as this could damage the element.

Precision Calibration:
There is a calibration adjustment control under the digital display on the front panel of the soldering station. This calibration control is to be used in conjunction with an accurate external thermometer. Set the temperature to the range required for your soldering application, and then place the tip of the soldering pencil onto the thermometer or thermocouple. Allow the thermometer reading to stabilise, and if the actual tip temperature reading on the soldering station is higher or lower than the display on the thermometer, use a 2mm precision Philips screwdriver to adjust the calibration control. Turning clockwise will lower the temperature (-), while turning counter-clockwise will increase the tip temperature (+).

General Cleaning:
The outer cover of the iron and station may be cleaned with a damp cloth using extremely small amounts of liquid detergent. Never submerse the unit in liquid or allow any liquid to enter the case of the station or the soldering tip area. Never use any solvent to clean the case.

Fuse Replacement:
If the fuse blows, the indicator light in the On/Off switch and the soldering station will not operate. The fuse is located in a holder on the rear panel above the power cord receptacle. Replace only with the correct value fuse, as listed on the label on the rear panel of the soldering station. Remove the fuse holder assembly as follows:

1. Unplug the power cord from the rear of the soldering station.
2. Insert a flat-blade screwdriver into the slot in the fuse holder and gently rotate the cover in a counter-clockwise direction until it pops out. Replace the old fuse with a new fuse of the correct size and ratings.
3. Place the fuse holder back into its receptacle, and using your screwdriver, gently push the holder into its receptacle while rotating the screwdriver in a clockwise direction until the holder clicks back into place.

Product Support:
For assistance with your T 2260 Soldering Station, contact the **DSE Technical Support Hotline** on Ph 1300 660 054.

Servicing:
Dangerous voltages are present inside the Soldering station power unit. Only qualified persons should remove the covers of the soldering station. If the iron or station should become faulty or, for some reason not operate normally, the complete soldering station should be returned to a DSE store or the service department of your authorised dealer or service agent.

Warranty details:
The T 2260 Soldering Station is warranted to be free of defects in materials or workmanship for a period of 1 year from the date of original purchase. The warranty does not apply to "consumables" such as soldering iron tips or solder. Within the warranty period DSE will, at our option, either repair or replace this unit, or take the product back and refund your money. To make a claim during the warranty period you will need to be able to present the purchase receipt covering the Soldering Station.